reprint of a lecture course, and may be fairly said to fulfil well the object proposed in the preface. Great pains has evidently been taken to obtain data of actual examples of important works within the above scope; the series of twenty-one well-executed large plates of these is a most valuable feature of the work. The get-up of the work, being issued from the Clarendon Press, is of course excellent; the number of folds in the plates is an inconvenience (few have less than six, and one has ten folds), which might have been obviated by placing fewer diagrams on each plate. A very useful feature is the addition at the end of each chapter of a short summary of its matter, with many good practical remarks.

The work opens with a chapter on the physics of the subject, followed by one on discharge-measurement, then by one on general principles. Then come seven chapters on various appliances and details, viz., dredgers, piling, foundations, locks, inclines, lifts, fixed and movable weirs, dams, and movable bridges. Then follow one chapter on inland canals, one on great ship canals, one on protection from floods, four on improvement of tidal rivers, and lastly, one on the improvement of the mouths of tideless rivers.

From the great variety of subjects treated of in a compass of 322 pages, the treatment is sometimes unequal. The descriptions of the newest forms of the various appliances are, together with their illustrative plates, very interesting and instructive. But perhaps the most valuable part of the whole work is the last five chapters on the difficult and important subject of the improvement of river mouths; the few guiding principles that can be said to be known about so obscure a question are well brought out from the study of grand examples. The subject of discharge-measurement is not adequately treated: a reference to the recently-published (1881) "Roorkee Hydraulic Experiments" would probably have materially influenced this chapter in giving less importance to current-meters, and more to floats (especially tube-rods), and in the entire rejection of the old Chézy formula, $V = C \times \sqrt{RS}$, with a *constant* value of $C$. The chapter on inland canals is also (perhaps unavoidably) sketchy: thus the description of Indian canals covers only two pages, many of them being simply named.

ALLAN CUNNINGHAM

*Galeni Pergamensis de Temperamentis et de Inæquali Intemperie Libri tres, Thoma Linacro Anglo Interprete,* 1521. Reproduced in exact Facsimile. With an Introduction by Joseph Frank Payne, M.D. (Cambridge: Macmillan and Bowes.)

THE book before us is one of a series of facsimile reprints of eight books, published in the years 1521–22, by John Siberch, at the first press established at Cambridge; and it would appear, that after the issue of this series, no other works were published there until the year 1585, when a law was passed, limiting the printing of books to London and the Universities.

The revival of classical literature which swept over Europe towards the close of the fifteenth century, effected a complete revolution in the theory of medicine, as well as in philosophy. English scholars of that period were, as a rule, unacquainted with Greek, the few exceptions being men who had studied at the Italian Universities; among these was Thomas Linacre, a Fellow of All Souls, Oxford, who, about the year 1495, visited Italy in the suite of Selling, when the latter was appointed envoy to the Pope, and, after being a fellow student with the sons of Lorenzo de Medici, under Politiano and Chalcondylas, proceeded to his degree of Doctor of Medicine at Padua. On his return to England, he brought with him the reputation of being one of the most elegant and accurate scholars of the day. Shortly afterwards he was appointed tutor to Prince Arthur, and became Court physician on the accession of Henry VIII. to the throne. The physicians of the day were mostly ecclesiastics, but no restriction was placed on the practice of medicine by persons, however ignorant of its principles; and Linacre, with the view of remedying the abuses that prevailed, devoted his fortune, amassed by the sale of the clerical livings to which he had been presented, to the foundation, in the year 1518, of the Royal College of Physicians, which, under its charter, had power to regulate the practice of medicine in the neighbourhood of London. It is interesting to know, that according to Linacre, a physician should be "a grave and learned person, well read in Galen, respecting but not bowing down to the prestige of the Universities; claiming for his own science a dignity apart from, but not conflicting with that of theology; looking upon surgeons and apothecaries with charity, and not without a sense of his own superiority."

The Galenical theories of humours and temperaments formed the groundwork on which the Greeks based their practice of medicine, and Linacre to bring these theories within the reach of all students of medicine translated into Latin six of Galen's works, among which were the "De Temperamentis" and "De Inæquali Intemperie," now before us, thus helping to replace the mysticism and empiricism of the Arabians by the accumulated observations recorded by Hippocrates and Galen. In these works it is assumed that to the four humours, blood, pituite, yellow bile, and black bile, there are the corresponding properties, moist-heat, moist-cold, dry-heat, and dry-cold; and that between health and disease there are four temperaments, characterised by an excess of either one or two of the cardinal qualities, heat, cold, moisture, and dryness. These were the only external influences acting on the body the ancients could recognise, as they were ignorant of the chemical processes of respiration, of the constitution of the atmosphere, and of electricity, of which we now take account. These theories are elaborated, and further, it is indicated that medicines may be classified according to their heating, drying, cooling, or moistening qualities, and should be administered so as to temper the errors of the humours in disease; and though the work has ceased to have a practical value for physicians, it yet remains of interest to the student of humoral pathology, and of the philosophy of the middle ages.

Students are indebted to the enterprise of Messrs. Macmillan and Bowes for the reprint of this scarce work, which was the first book containing Greek characters printed in England, and we are glad to learn that the same publishers propose shortly to issue the remainder of the series. The book is edited by Dr. J. F. Payne, and is prefaced by a portrait and an admirable life of Linacre.

*Rhopalocera Malayana: a Description of the Butterflies of the Malay Peninsula.* By W. L. Distant. (London: W. L. Distant, care of West, Newman and Co., 54, Hatton Garden, E.C.)

WE have received the first part of this handsome work, in which it is proposed to describe and figure all the species of butterflies which inhabit the Malay Peninsula and the islands of Penang and Singapore. Forty-four coloured figures of butterflies are given in this part, occupying four plates of large quarto size: and they are most admirably executed in chromo-lithography. Some of the figures, indeed, are hardly to be distinguished from good hand-colouring. The descriptions are full and careful, and much judgment is shown in using, as far as possible, old and well-established names, and in rejecting needless sub-divisions of the genera. It is expected that the work will be completed in six or seven parts, forming a handsome quarto volume; and we trust that the author may obtain numerous subscribers in our wealthy colonies of Singapore and Penang, as well as at home, to encourage him to complete the work in the same full and careful manner as he has commenced it.

As most of the butterflies of the larger Malay Islands

© 1882 Nature Publishing Group

must be studied in comparison with those of the Malay Peninsula for the purposes of his work, we would suggest to Mr. Distant that he would add greatly to its value to all European collectors if he would give, in a supplementary part, a complete synopsis of the known species of butterflies inhabiting the Indo-Malayan region. Having figured all the continental Malayan species, the descriptions of those of the islands might be, in most cases, by comparative characters, aided occasionally, perhaps, by outline woodcuts. We believe that such an extension of the scope of the work would double its value, and add largely to the list of subscribers; while the increased expenditure would be comparatively unimportant.

A. R. W.

*Conic Sections Treated Geometrically.* By S. H. Haslam, M.A., and J. Edwards, M.A. (London: Longmans, 1881.)

THIS is a neat little treatise on the conic sections, containing—what appears to be a novelty—a method of *plane projection*, to which the authors give the name of *Focal Projection*. The remarkable feature of the book is, that the authors, who are evidently well up in these curves, should not be acquainted with the writings of the present master of St. John's College, on the same subject. No one who has looked into Dr. Taylor's recent works, could be unacquainted with what he has said upon the contributions of Boscovich and G. Walker, and would hardly use the "generating circle" of a conic in the same fashion as Boscovich does, and write, after the definition, "which we have called the *auxiliary circle of a point*."

*Schwatka's Search: Sledging in the Arctic in Quest of the Franklin Records.* By W. H. Gilder. Maps and Illustrations. (London: Sampson Low and Co.)

THIS is the complete record of the expedition sent out by private subscription, in 1878, under Lieut. Schwatka, to endeavour to find the records of the Franklin expedition, which were reported to be in possession of the Nechelli Eskimo. With the general results of the expedition, our readers have already been made acquainted. The reported records, as might have been expected, were never found. But in and around the Fish River, and in King William Land and neighbourhood, several relics were obtained, and several graves and cairns found. The expedition, indeed, completed the story of the sad disaster of the *Erebus* and *Terror*. During the search, sledge-journeys of upwards of 3000 miles were made, and thus much welcome additional information was obtained concerning the country between Hudson's Bay and King William Sound. The expedition came a good deal into contact with the Eskimo, concerning whom Mr. Gilder has much to tell us. The narrative is interesting, and is welcome as throwing additional light on an Arctic expedition in which Englishmen have always continued to be interested. There are a number of good illustrations.

*Chambers's Etymological Dictionary of the English Language.* A new and thoroughly revised edition. Edited by Andrew Findlater, M.A., LL.D. (Edinburgh: W. and R. Chambers, 1882.)

THIS little work, since the publication of the first edition, edited by the late Mr. James Donald, has had deservedly a very extensive circulation. It is just the book to have at one's elbow for constant reference, handy, clearly printed, fairly full, and thoroughly trustworthy. This new edition has evidently been so thoroughly revised by Dr. Findlater, as to be virtually a new work. The selection of words has been made with great discrimination, the definitions are clear and comprehensive, and the etymologies up to the latest results of linguistic research. The dictionary contains a large number of scientific terms, though there are one or two others that we think ought to have found a place. The dictionary is the best of its class; the appendix contains much useful information, including a table of the Metric System.

*Tunis; The Land and the People.* By the Chevalier de Hesse-Wartegg. (London: Chatto and Windus, 1882.)

HERR VON HESSE-WARTEGG spent some months in Tunis last year, and has made a readable book out of his notes. He has also drawn largely on other sources of information, so that those who know little about a country which has been so much before the public recently, will find some useful information in this volume. The author spent a good deal of time about Tunis and its environs, but seems also to have visited several other places in the Regency, including, apparently, Kairwan. He tells us a good deal about the people and their customs, about the government, the Bishas, antiquities, &c. There are several good illustrations, but no map.

## LETTERS TO THE EDITOR

[*The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts. No notice is taken of anonymous communications.*

[*The Editor urgently requests correspondents to keep their letters as short as possible. The pressure on his space is so great that it is impossible otherwise to ensure the appearance even of communications containing interesting and novel facts.*]

### Silurian Fossils in the North-west Highlands

ON my return to-day from a geological tour in the North-west Highlands, I read with much interest the letters of Mr. Hudleston and Prof. Bonney on the above subject. The question as to the geological position of the limestone series in West Ross-shire, correlated by Murchison with the Durness limestone, is one to which I devoted special attention during my late visit to the neighbourhoods of Lochs Carron, Doule, Kishorn, and Maree. The general appearance of the limestone in these areas is sufficiently like that of Durness to lead to the supposition that it is of the same age, but this of course can only be proved by fossil evidence. The conclusion at which I have arrived, however, in regard to the geological position of the limestone, and as to its relation to the so-called Upper Gneiss rocks of the central parts of Ross-shire, is in direct opposition to the views of Murchison, and accords in the main with that of Prof. Nicol. The great triangular patch at the head of Loch Kishorn consists of a series of thick beds of grey limestone, with a few bands of sandstone in an unaltered condition, and is undoubtedly dropped by faults amongst much older strata, as maintained by Prof. Nicol. Between Lochs Carron and Doule the same series is seen to rest unconformably upon much higher beds than those which it is supposed by Murchison and others to underlie at Loch Kishorn. As I purpose shortly to give a full account of these researches, I will not venture now to trespass further on your space.

HENRY HICKS

Hendon, N.W., April 29

### Earthquakes and Mountain Ranges

IN NATURE of the 27th ult., in a note on a recent meeting of the Seismological Society of Japan, it is mentioned that the observations of Prof. Milne "as far as they have at present gone, show in a remarkable manner how a large mountain range absorbs earthquake energy." It may be worth while to mention, as an exception to this, that the Swiss earthquake at 1 p.m. on July 25, 1855, which apparently had its origin among the mountains on the south side of the Valais, between Visp and S. Nicholas, both of which places were seriously damaged, travelled through the Bernese Oberland, across the great valley of Switzerland, and then through the Jura. I was at the time in a small inn, at a place called Belle Rive in the Munster Thal, on the north side of the Jura. The house was severely shaken, so that some plaster fell from the ceiling. This was about seventy-five miles from the place of origin, and the wave in that interval had passed through two mountain ranges. It is probable that this earthquake was caused by a disturbance of a quite different kind from the volcanic disturbances of Japan, and that may account for a difference in the result.

O. FISHER

© 1882 Nature Publishing Group